



[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2014-0210]

Applications of Bioassay for Uranium

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft regulatory guide; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment draft regulatory guide (DG), DG-8054, “Applications of Bioassay for Uranium.” This guidance provides acceptable guidance for NRC licensees, for the development and implementation of a bioassay program that will monitor the intake of mixtures of the naturally occurring isotopes of uranium (U-234, U-235, and U-238) by occupational workers. A bioassay is a determination of the kind, quantity, location, or retention of radionuclides in the body by direct (in vivo) measurement or by indirect (in vitro) analysis of material excreted or removed from the body.

DATES: Submit comments by **[INSERT DATE 60 DAYS FROM THE DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date. Although a time limit is given, comments and suggestions in connection with items for inclusion in NRC regulatory guides currently being developed or improvements in all published NRC regulatory guides are encouraged at any time.

ADDRESSES: You may submit comments by any of the following methods (unless this document describes a different method for submitting comments on a specific subject):

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2014-0210. Address questions about NRC dockets to Carol Gallagher; telephone: 301-287-3422; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **Mail comments to:** Cindy Bladey, Office of Administration, Mail Stop: 3WFN-06-A44M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Harriet Karagiannis, telephone: 301-251-7477; e-mail: harriet.karagiannis@nrc.gov or Casper Sun, telephone: 301-251-7912; e-mail: casper.sun@nrc.gov. Both are staff of the Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

Obtaining Information and Submitting Comments.

A. Obtaining Information.

Please refer to Docket ID NRC-2014-0210 when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2014-0210. Address questions about NRC dockets to Carol Gallagher; telephone: 301-287-3422; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual(s) listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**
You may access publicly available documents online in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-Based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The draft regulatory guide is available electronically under ADAMS Accession No. ML14133A599. The regulatory analysis may be found in ADAMS under Accession No. ML14133A612.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852.

B. Submitting Comments.

Please include Docket ID NRC-2014-0210 in the subject line of your comment submission to ensure that the NRC is able to make your comment submission available to the public in this docket.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <http://www.regulations.gov> as well as enters the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or

contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC will not edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

II. Additional Information.

The NRC is issuing for public comment a DG in the NRC's "Regulatory Guide" series. This series was developed to describe and make available to the public and the regulated community such information as methods that are acceptable to the NRC staff for implementing specific parts of the NRC's regulations, techniques that the staff uses in evaluating specific problems or postulated accidents, and data that the staff needs in its review of applications for permits and licenses.

This DG, entitled, "Applications of Bioassay for Uranium," is temporarily identified by its task number, DG-8054. Draft regulatory guide, DG-8054 is a proposed revision to the NRC Regulatory Guide (RG) 8.11, "Applications of Bioassay for Uranium," (Revision 1 of RG 8.11).

The NRC issued RG 8.11 in June 1974 to provide guidance to NRC licensees on methods of uranium bioassay that the NRC staff found acceptable to demonstrate compliance with the then-current version of NRC's radiation protection regulations in part 20 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Standards for Protection against Radiation." In a 1991 rulemaking, the NRC promulgated amendments to its radiation protection regulations in 10 CFR part 20 (May 21, 1991; 56 FR 23360). As such, DG-8054 cross-references to the relevant

sections of the current 10 CFR part 20 regulations. In addition, DG-8054 endorses for use certain sections of a voluntary consensus standard, namely, the American National Standards Institute/Health Physics Society (ANSI/HPS) N13.22-2013 standard, "Bioassay Programs for Uranium," as a means for licensees to demonstrate compliance with the NRC regulations, 10 CFR 20.1201, "Occupational Dose Limits for Adults," and 10 CFR 20.1204, "Determination of Internal Exposure." Specifically, 10 CFR 20.1201(e) requires NRC licensees to limit the soluble uranium intake to an occupational worker to 10 milligrams in a week, in addition to annual occupational dose limits, and 10 CFR 20.1204(a) requires NRC licensees to take suitable and timely measurements of the concentrations of radioactive materials in air in work areas and the quantities of radionuclides in the bodies of occupational workers. Finally, DG-8054 identifies the bioassay interpretation methods in the NRC document NUREG/CR-4884, "Interpretation of Bioassay Measurement," as an acceptable method to comply with NRC requirements.

III. Backfitting and Issue Finality.

This DG, if finalized, would apply to current and future holders of special nuclear material licenses under 10 CFR part 70 and certificates of compliance or approvals of a compliance plan for gaseous diffusion plants under 10 CFR part 76 if they are also applicants for or holders of special nuclear materials licenses under 10 CFR part 70. If DG-8054 is finalized and issued as a revision to RG 8.11, such issuance would not constitute backfitting under 10 CFR parts 70 or 76. As stated in the "Implementation" section of DG-8054, the NRC has no current intention to impose this regulatory guide on current holders of part 70 licenses or part 76 certificates of compliance.

This DG, if finalized as a revision to RG 8.11, could be applied to applications for part 70 licenses and part 76 certificates of compliance docketed by the NRC as of the date of issuance

of the revised RG 8.11, as well as future such applications submitted after the issuance of the revised RG 8.11. Such action would not constitute backfitting as defined in 10 CFR 70.76 and 76.76 inasmuch as such applicants or potential applicants are not within the scope of entities protected by 10 CFR 70.76 and 76.76.

Dated at Rockville, Maryland, this 30th day of September, 2014.

For the Nuclear Regulatory Commission.

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[FR Doc. 2014-23719 Filed 10/03/2014 at 8:45 am;
Publication Date: 10/06/2014]